REMARKS

This is a full and timely response to the non-final Office Action mailed October 3, 2006.

The Applicant appreciates the Examiner's acknowledgement of the receipt certified copies of all priority documents.

The Applicant's claims 1-12 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 7,034,786 to Ham ("Ham"). This rejection is respectfully traversed.

Ham does not teach or disclose all of the features recited in the Applicant's claims. Ham teaches generally a method for compensating for the time-delay of a liquid-crystal display ("LCD") while maintaining appropriate color-balance. Conventional LCDs suffer from a relatively slower response time when compared to alternative display technologies; this slower response time results in a blurring between subsequent frames of video. (Ham, at 1:28-38). One method to correct for this slower response time is to modulate the driving signal to achieve a faster change. (Ham, at 1:39-2:35 and Fig. 2). If the un-modulated signal would result in an increase in voltage, the modulated signal increases voltage even further; conversely, an un-modulated signal that would decrease the voltage is modulated to cause an even greater decrease. (Ham, Eqns. 1-3). According to Ham, applying this overdriving technique to individual color components independently can cause the resultant color image to be faulty. (Ham, at 2:36-3:7). As a purported solution, Ham proposes also modulating the voltages of pixels that would ordinarily remain constant. (Ham, at 3:25-32 and Fig. 7A).

Ham does not teach or suggest all of the features of Applicant's claim 1. For example, Ham fails to teach *comparing means for comparing voltages of the output signals from at least two data signal lines*. Ham may teach comparing means (e.g., data modulator **93**, data comparator **52**, and data modulator **53**) for comparing input values for the current frame to corresponding input values from the previous frame. (Ham, at 6:15-31, 8:23-52 and Figs. 6, 10). However, all of these components compare the input digital video signal and a stored frame buffer, (Ham at 5:45-47, 7:43-45 and Figs. 5, 9), not the analog output signals of the data lines.

Indeed, the results of Ham's comparison means act as *inputs* to drive the data lines through the data drivers **95** and **55**, (Ham, at 5:63-6:5, 7:61-8:3 and Figs 5, 9). Therefore any comparison means taught by Ham are in no way analogous to, nor do they in any way suggest, comparison means of the kind recited in Applicant's claim 1.

Therefore, for at least this reason, the Applicant's claim 1 is patentable and the Applicant requests that its rejection be withdrawn. Furthermore, claims 2-4, which are dependant on claim 1 and incorporate all of the limitations therein, are also patentable for at least this reason and the Applicant requests that their rejections be withdrawn.

For similar reasons, claim 6, reciting a similar limitation of *means disposed at intervals of two of the data signal lines for comparing voltages of the two data signal lines*, is also patentable and the Applicant requests that its rejection be withdrawn. Furthermore, claims 7-8, which are dependent on claim 6 and incorporate all of the limitations therein, are also patentable for at least this reason and the Applicant requests that their rejections be withdrawn.

Ham does not teach or suggest all of the features of Applicant's claim 2. For example, Ham does not teach *detecting means connected to the comparing means for detecting defective pixels*. Ham may teach a means of correcting for distorted color balance, (Ham, at 8:20-21), but it fails to teach any *detecting* means at all. According to the disclosure of Ham, time-delay and color distortion are corrected using data from uniform look-up tables (6:15-25, 8:8-11, 8:40-46 and Figs. 6, 10), not data detected from the operation of individual pixels. Ham does not suggest detecting *any* data from the pixels themselves.

Furthermore, *defective pixels* cannot properly read on the time-delay and color-correction issues addressed by Ham – even ideal pixels will experience time-delay (and the inherent distorted color balance) due to a finite charging current to the capacitor and inherent properties of liquid crystals. Rather, defective pixels are those whose operating characteristics are negatively impacted by manufacturing defects. (e.g., Applicant's specification, at paragraph 0061). Defective pixels are not addressed at all by the disclosure of Ham.

Therefore Ham cannot be read as teaching the detecting means recited in the Applicant's claim 2, and this claim is patentable for at least this reason and the Applicant requests that its rejection be withdrawn. Furthermore claim 3, which is dependent on claim 2 and incorporates all of the limitations therein, is also patentable for at least this reason and the Applicant requests that its rejection be withdrawn.

Ham does not teach or suggest all of the features of Applicant's claim 3. Even if comparison means taught by Ham were analogous to the comparison means of Applicant's claim 1 (they are not), and even if Ham taught a detecting means for detecting defective pixels as in Applicant's claim 2 (it does not), at best the exclusive OR **62** would be a component of said comparing means, not said detecting means, as its compares the current input signal with the stored frame buffer. (Ham, at 8:24-39 and Fig. 10. See also Fig. 9, labeling functional unit **52** as "Data Comparator"). The exclusive OR of Ham cannot be interpreted as part of a detecting means. If said detecting means were taught by Ham, it would be operating on the modulated data output from said comparing means (e.g., "RGB Mdata" in Figs. 9, 10). Therefore, even disregarding the apparent differences between Ham and Applicant's claims 1 and 2, the exclusive OR of Ham cannot be said to anticipate the exclusive OR recited in the Applicant's claim 3.

Therefore, Applicant's claim 3 is patentable for at least this reason and the Applicant requests that its rejection be withdrawn.

For similar reasons, Applicant's claim 7. reciting a similar limitation of *exclusive OR means connected to the comparing means*, is also patentable and the Applicant requests that its rejection be withdrawn.

Ham does not teach or suggest all of the features of Applicant's claim 4. For example, Ham fails to teach *data converting means connected to the comparing means for converting parallelly supplied data into serial data and outputting the serial data*. The data comparator **52**

and data modulator **53** of Ham receive digital RGB data, (Ham, at 7:43-45), and output

modulated digital RGB data, (Ham, at 7:61-67). Ham contains no discussion as to whether these

signals are parallel or serial and furthermore contains no suggestion of converting between these

two signal formats.

Therefore Applicant's claim 4 is patentable for at least this reason and the Applicant

requests that its rejection be withdrawn.

For similar reasons, Applicant's claim 8. reciting a similar limitation of *data converting*

means connected to the comparing means for converting parallelly supplied data into serial data

and outputting the serial data, is also patentable and the Applicant requests that its rejection be

withdrawn.

Ham does not teach or suggest all of the features of Applicant's claim 9. For example,

Ham fails to teach *a plurality of auxiliary data signal lines disposed corresponding to the data*

signal lines and connected to the output electrodes of the respective pixel transistors. Neither of

the LCD embodiments described by Ham contain these auxiliary data signal lines. (Ham, at

5:25-44, 7:18-41). Rather, the drain electrodes in Ham (analogous to the "output electrodes"

recited in Applicant's claims) of the pixel transistors are only described as being connected to "a

pixel electrode of the liquid crystal cell." (Ham, at 5:43-44, 7:39-41). The passages cited by the

Examiner in this regard describe the data comparator and data modulator, which operate on the

video signal before it reaches the data driver; these passages make no reference to the data signal

lines, auxiliary data signal lines, or the respective pixel transistors. Nowhere in the Ham

reference is there a suggestion of these auxiliary data signal lines.

Furthermore, Ham fails to teach *calculating means connected to one of the auxiliary data*

signal lines and one of the gate signal lines. Without teaching or suggesting said auxiliary data

signal lines, Ham cannot teach further functional units dependant thereon.

Therefore Applicant's claim 9 is patentable for at least this reason and the Applicant

requests that its rejection be withdrawn.

Ham does not teach or suggest all of the features of Applicant's claim 10, 11, or 12. Ham fails to teach or suggest any method of *inspecting* a liquid crystal display device. As previously argued, Ham makes no suggestion of reading any signals from the pixels of the LCD – the only "comparisons" possibly suggested by Ham are between different samplings of the input video signal.

Therefore Applicant's claims 10, 11, and 12 are patentable for at least this reason and the Applicant requests that their rejections be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2889 from which the undersigned is authorized to draw.

Dated: December 21, 2006

Respectfully submitted,

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